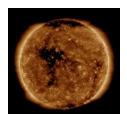




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SOLAR CORONAL HOLES



Recently, a new study has accurately estimated the physical parameters of thermal and magnetic field structures of solar coronal holes.

- Coronal holes are dark regions in X-ray and extreme ultraviolet images of the Sun.
- These were **discovered in the 1970s** by X-ray satellites.

Features of Solar Coronal Holes:

- o They appear dark because they **are cooler, less dense regions**than the surrounding plasma and are regions of open, unipolar magnetic fields.
- They have open magnetic field lines and are hence important for understanding the interplanetary medium and space weather.
- Coronal holes can last between a few weeks to months. The holes are not a unique phenomenon, appearing throughout the sun's approximately 11-year solar cycle.
- o They can **last much longer during solar minimum** − a period of time when activity on the Sun is substantially diminished, according to NASA.

Significance of Solar Coronal Holes:

- The occurrences of coronal holes are associated with disturbances in the Earth's ionosphere, the layer of the atmosphere that reflects and modifies the radio waves, leading to further communication issues.
- They have significant influence on space weather that affects satellites, as well as the Indian summer monsoon rainfall.





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WHO IS AN ADVOCATE-ON-RECORD (AOR)?



The Supreme Court recently held that Advocates-on-Record (AoRs) bear full responsibility for the accuracy of petitions filed before the Court, even if the drafts are prepared by other advocates.

- The concept of AoR was **introduced by the SC** with the power given to it **under Article 145**(1) of the Indian Constitution, which states that the SC may, from time to time, make rules for regulating the practices and procedures in the court.
- An AoR is a legal professional who is entitled to represent clients and plead for them in the SC.
- It is a specific category of advocates with **rights of audience in the SC.**
- An AoR has the exclusive right to file and conduct cases in the SC.
 - No advocate other than AoR can appear and plead in any matter unless an AoR instructs him..
- Roles and Responsibilities:
 - Only an AoR is authorised to file a Vakalatnama on behalf of a client in the SC. The Vakalatnama is a crucial document that grants the advocate the authority to represent the client.
 - All the procedural aspects need to be completed by AOR with the assistance of a registered clerk.
 - This includes drafting and filing petitions, applications, and other legal documents.
 - o Any notice or order/correspondence by the SC is sent to the AoR.
 - An AoR is personally liable for the due payment of all fees/charges payable to the court.
- Order IV rule 5 of the Supreme Court Rules, 2013, lays down the **requirements to be fulfilled to become an AoR**. They are as follows:





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- The Advocate is required to be enrolled with any State Bar Council.
- o The Advocate is required to have a **prior experience of at least 4 years.**
- o The Advocate has undergone a **training of 1 year under a senior AoR.**
- o The Advocate has **appeared for the examination** conducted by the SC.
- The Advocate is required to have an office in Delhi within a radius of 10 miles from the SC house and give an undertaking to employ a clerk, who shall be a registered clerk, within one month of being registered as an AoR.
- Once registered, an AOR is **issued a unique identification number** that must be used on all documents filed in the SC.

WHAT IS PARKINSON'S DISEASE (PD)?



A breakthrough study has uncovered a hidden player in Parkinson's disease—24-OHC, a cholesterol metabolite that fuels the spread of harmful protein clumps in the brain.

- It is a progressive neurodegenerative disorder that primarily affects movement.
- It causes nerve cells (neurons) in parts of the brain to weaken, become damaged, and die, leading to symptoms that include problems with movement, tremor, stiffness, and impaired balance.
- As symptoms progress, people with PD may have difficulty walking, talking, or completing other simple tasks.
- Although many brain areas are affected in Parkinson's disease, the most common symptoms result from the loss of neurons in an area near the base of the brain called the substantia nigra.
 - o The neurons in this area produce dopamine.
 - Dopamine is the chemical messenger that transmits signals in the brain to produce smooth, purposeful movement.





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- Most people with PD have lost 60 to 80% or more of the dopamine-producing cells in the substantia nigra by the time symptoms appear.
- Lack of dopamine causes the slowed movements and tremors symptoms of Parkinson's disease.

• Who does it affect?

- The risk of developing Parkinson's disease naturally increases with age, and the **average** age at which it starts is **60 years old.**
- It's slightly more common in males.
- **Diagnosis**: Currently, **no blood laboratory or radiological tests** are available to diagnose Parkinson's disease.
- **Treatment:** There's **no cure** for this disease, but treatments can help significantly improve your symptoms.

DINESH KHARA COMMITTEE



The Insurance Regulatory and Development Authority of India (IRDAI) recently set up a seven-member committee headed by former chairman of SBI Dinesh Khara to examine proposed amendments to the Insurance Act, 1938, and suggest

a framework for its implementation.

- It is a high-powered seven-member committee set up by the Insurance Regulatory and Development Authority (IRDAI).
- Purpose: To review proposed amendments to the Insurance Act of 1938 and recommend a regulatory framework for their implementation.
- The committee is formed as the Union government prepares to introduce the Insurance Amendment Bill to Parliament.
- The **proposed amendments include increasing** the foreign direct investment (**FDI**) cap in the insurance sector from 74% to 100%, reducing paid-up capital requirements, introducing a composite licence system, and streamlining regulatory processes.





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• The committee's mandate is strictly limited to reviewing the proposed changes and determining their implementation through regulations and circulars, without suggesting additional amendments.

Insurance Act, 1938:

- It serves as the primary regulatory framework for the country's insurance industry and led to the establishment of IRDAI.
- The Act defines the scope of life, general, and health insurance in the country and regulates the role of insurance agents.
- It regulates the relationship between an insurer, its policyholders, shareholders, and the regulator IRDAI.

WHAT IS MAJORANA 1?



Microsoft released Majorana 1, the world's first quantum chip built on a topological core, recently.

- It is the quantum computing chip developed by Microsoft.
- The Majorana 1 is designed to make quantum computing more practical, faster, and reliable.
 - Quantum computers process information differently from traditional computers, using quantum bits (qubits) instead of regular bits.
 - Qubits can exist in states 0, 1, or both simultaneously (superposition).
 - This allows them to solve complex problems much faster, but qubits are extremely fragile and prone to errors.
- Majorana 1 leverages a new material called a topoconductor or a topological superconductor, which helps create a special kind of qubit that is more stable and less prone to losing information.
- Majorana 1 relies on a subatomic particle called the Majorana fermion, which was theorised as existing by scientist Ettore Majorana in 1937.





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- The Majorana 1 chip is made of a material made from indium arsenide and aluminum to create what Microsoft calls the "world's first topoconductor,".
- This could finally **allow quantum computers to scale up to millions of qubits** and help solve real-world problems like designing better medicines, reducing pollution, and creating materials that can repair themselves.

UN-HABITAT



Recently, C40 Cities and UN-Habitat have announced a landmark partnership to transform urban planning.

- It is the focal point for all urbanization and human settlement matters within the UN system.
- It is mandated by the UN General Assembly to promote **socially and environmentally sustainable towns** and cities with the goal of providing adequate shelter for all.
- It works with partners to build inclusive, safe, resilient and sustainable cities and communities.
- UN-Habitat promotes urbanization as a positive transformative force for people and communities, reducing inequality, discrimination and poverty.
- **Governance structure:** It is a **three-tier structure** made up of the UN-Habitat Assembly, the Executive Board and the Committee of Permanent Representatives.
 - UN-Habitat Assembly is a universal body composed of the 193 member states
 of the United Nations and convenes every four years.
 - The Executive Board is composed of 36 member states elected by the UN-Habitat Assembly and meets three times a year to increase the oversight by Member States of UN-Habitat operations.
 - The Committee of Permanent Representatives of UN-Habitat (CPR) meets twice every four years in an open-ended manner.
- **Headquarters:** Nairobi





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DIGITAL BRAND IDENTITY MANUAL



Recently, the Ministry of Electronics and Information Technology (MeitY) launched the Digital Brand Identity Manual (DBIM) and the inaugural Chief Information Officer (CIO) Conference 2025.

- It aims to establish a **standardized and cohesive digital identity** across all government ministries and platforms, enhancing accessibility, inclusivity, and citizen engagement.
- The primary objective of the DBIM is to create a **unified and consistent digital brand** for the Government of India.
- It is part of the "Gov.In: Harmonisation of Government of India's Digital Footprint" initiative.
- The initiative focuses on **simplifying and standardizing government websites**, ensuring that citizens from diverse backgrounds can easily navigate and access essential government services.
- By standardizing elements such as color palettes, typography, and iconography, the manual not only ensures uniformity in look and feel but also strengthens the integrity of government-hosted data.
- This cohesive approach will enable government departments to present a compelling and **trustworthy brand presence**, both nationally and globally.
- The guidelines extend beyond websites to cover mobile applications and social media platforms, reinforcing a seamless user experience across all digital touch points.
- Features of DBIM initiative:
 - o **DBIM Toolkit** for ensuring uniformity in digital identity
 - o **In CMS Platform** for streamlined website management
 - o Central Content Publishing System (CCPS) for centralized content governance
 - o Social Media Campaign Guidelines to standardize digital communication





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LOKPAL AND LOKAYUKTAS ACT, 2013: STRENGTHENING ANTI-CORRUPTION FRAMEWORK IN INDIA

- The Lokpal and Lokayuktas Act, 2013, was introduced to combat corruption at the highest levels of government in India.
- It provides for the establishment of the **Lokpal at the central level** and **Lokayuktas in states**, empowering them to investigate complaints against public officials, including the Prime Minister, Ministers, and Members of Parliament.
- The Act was a result of prolonged public movements against corruption, particularly the **India Against Corruption movement** led by **Anna Hazare**.
- It aims to bring greater transparency and accountability in governance by establishing an **independent anti-corruption body** with investigative powers.

About Lokpal and Lokayuktas Act, 2013

- The Lokpal and Lokayuktas Act, 2013, establishes a multi-member anti-corruption body with the authority to investigate allegations of corruption against high-ranking public officials.
- The Lokpal is responsible for handling cases at the central level, while Lokayuktas are set up by **individual states** to deal with corruption cases at the state level.
- Key Features of the Act:
 - Establishment of Lokpal: A central institution headed by a chairperson and up to eight members, including judicial and non-judicial members.
 - Jurisdiction: Covers the Prime Minister (with certain exceptions), Ministers,
 MPs, and Group A and B officers of the central government.
 - Lokayuktas in States: Every state is required to establish a Lokayukta to investigate corruption allegations against state officials.
 - o **Inquiry and Prosecution Powers**: Lokpal has power to order inquiries, recommend prosecution, and direct disciplinary action.





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 Whistleblower Protection: The Act provides safeguards for whistleblowers reporting corruption cases.

Significance of the Lokpal and Lokayuktas Act

- Strengthening Anti-Corruption Measures
 - The Act provides an independent watchdog mechanism to investigate corruption cases at both central and state levels, ensuring greater transparency in public office.
- Public Accountability
 - By bringing top government officials, including the Prime Minister and MPs,
 under scrutiny, the Act reinforces public trust in governance.
- Empowering Lokpal with Investigative Powers
 - The Lokpal has the authority to conduct independent inquiries and recommend
 prosecution without needing prior government approval.
- Ensuring State-Level Vigilance
 - The requirement to set up Lokayuktas in every state strengthens state-level anti-corruption mechanisms.

Challenges and Criticisms

- Delay in Lokayukta Implementation: Many states have not yet appointed Lokayuktas, weakening the state-level anti-corruption framework.
- Limited Investigative Autonomy: The CBI (Central Bureau of Investigation), which assists in investigations, still functions under government control, affecting its independence.
- Lack of Public Awareness: Many citizens are unaware of Lokpal's role and how to file complaints, reducing its effectiveness.
- Political Interference: Critics argue that appointments to Lokpal are influenced by the ruling government, impacting its impartiality.